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3722

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/045,042
Filing Date: January 15, 2002
Appellant(s): SCHLEMMER ET AL.

Neil F. Greenblum
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 17 May 2004.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct as of the time of the filing of the Appeal Brief.

After review of the Appeal Brief and the Appeal Conference, it has been determined that claims 1-39 are allowable and claim 40 remains rejected.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows: Applicant states in Paragraph (A) that Claim 40 was rejected under 35 USC 102(b) as being anticipated by International Publication No. WO 98/51438. Claim 40 was actually rejected under 35 USC 103(a) over International Publication No. WO 98/51438 in view of US Pat. No. 6,464,433 (Shaffer).

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(7) *Grouping of Claims*

The grouping of claims is moot since claims 1-39 have been deemed allowable. The only outstanding claim is claim 40.

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

6,224,300	Baxivanelis et al.	5-2001
6,464,433	Shaffer	10-2002
PCT WO 98/51438	Baxivanelis et al.	4-1998

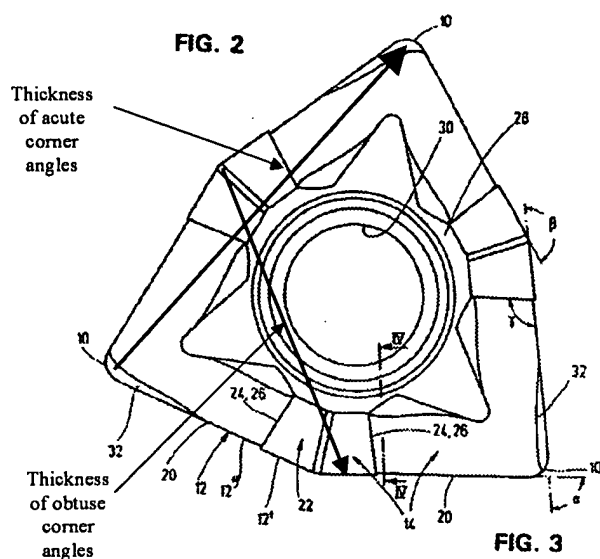
(10) *Grounds of Rejection*

The following ground(s) of rejection, as recited in the previous office action of 30 January 2004, are applicable to the appealed claims:

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over PCT WO 98/51438 (Baxivanelis et al.) in view of US Pat. No. 6,464,433 (Shaffer). The references to Baxivanelis et al. will be made to the English Equivalent document US Pat. No. 6,224,300 (Baxivanelis et al.).

Baxivanelis et al. teaches a hexagonal indexable insert with alternating obtuse and acute corner angles (fig. 1, col. 3, line 64 to col. 4, line 7) with a thickness from the support surface to the acute corner angles is thicker than a thickness from support surface to the obtuse corner angles (fig. 3 below).

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Baxivanelis et al. teaches the indexable tip comprises alternately obtuse and acute corners and six straight cutting edges (fig. 3 above).

Baxivanelis teaches at least one cutting edge 12 comprises three cutting edges, cutting corner 10 and two cutting edge sections 20 (col. 3, lines 1-5, fig. 1).

Baxivanelis et al. teaches the alternating rounded obtuse and acute angles, and the acute angles an in the range of 75° to 88° (col. 1, lines 60-64).

Baxivanelis et al. teaches a hexagonal insert (fig. 1) with at least one circumferential cutting edge 10 oblique to a side support surface (fig. 1). While Baxivanelis et al. does teach that the insert is used in a cutting tool (col. 2, lines 40-42) Baxivanelis et al. is silent as to the details of the tool. Additionally, Baxivanelis et al. doesn't quantify the relative dimensions of the insert width and thickness.

Shaffer teaches a cutting tool for drilling and turning, comprising a base body 24 comprising a clamping part 40 (fig. 1) and a cylindrical working part 26 (fig. 3) axially spaced

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from each other; and an indexable tip 28, releasably connected to the working part 26, having at least one circumferential cutting edge (fig. 2, col. 3, lines 24-36).

Shaffer teaches the working part 26 essentially cylindrical (fig. 3), and the indexable tip 28 positioned at an end of the working part remote from the clamping part 40 (fig. 2) with the working part 26 comprising a flute running in a direction of a tool axis and a form-locking seat for the indexable tip 28 (fig. 3), wherein the indexable tip 28 is seated on the working part 26, at least one cutting edge slightly projects from the working part (fig. 2 and 3) and the flute running in a direction of the tool axis is formed with a twist (fig. 2).

Shaffer teaches the base body 24 comprises at least one bore 42 for inserting at least one of coolant and lubricant, and an exit 46 obliquely arranged relative to the tool axis directed at the indexable tip (col. 3, lines 43-51).

Shaffer teaches a cutting tool with a working part elongated in the axial direction having a seat parallel to the axial direction (fig. 2).

Shaffer teaches the working part 26 and Baxivanelis teaches the hexagonal indexable. Baxivanelis et al. in view of Shaffer does not teach the dimensions of the indexable tips or the greatest width of the indexable tip in comparison to the working part. It would have been an obvious matter of design choice to increase or decrease the greatest size of the hexagonal indexable tip as taught by Baxivanelis, since such a modification would have involved a mere change in the size of the component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted the specific toolholder taught by Shaffer for the generic

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tool taught by Baxivanelis et al. for the purpose of providing a boring bar with an optimum degree of straightness, thereby increasing its useful life and providing for the optimum removal of material (see Shaffer col. 1, lines 46-67 for example).

(11) Response to Argument

Claims 1-17 and 18-39 are allowable

Claim 40 stands rejected.

Claim 40 reads as follows:

Claim 40 A cutting tool for drilling and turning, comprising:

a working part elongated in an axial direction having a seat parallel to said axial direction;

an indexable tip, releasably connected to said seat, comprising a hexagonal shape, at least one circumferential cutting edge located between adjacent angles of said hexagonal shape, and a support surface;

a greatest width across said hexagonal shape is at least 0.92 times a thickness of said working part; and

said at least one circumferential cutting edge being arranged obliquely to said support surface.

Regarding Appellants Arguments in Paragraph 8 of the Appeal brief, subparagraphs (A), (B), (C) (D), Appellants arguments with respect to independent claims 1 and 18 were persuasive.

Regarding Appellants Arguments in Paragraph 8 of the Appeal brief, subparagraphs (A), in response to Appellants argument that the rejection of claim 40 under 35 USC 102(b) over WO 438 is in error. It is noted that claim 40 was never rejected under 35 USC 102(b) over WO 438.

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Therefore Appellants Arguments in Paragraph 8 of the Appeal brief, subparagraphs (A), regarding the rejection of Claim 40 under 35 USC 102(b) rejection is moot.

Claim 40 has only been rejected under 35 U.S.C. 103(a) as being unpatentable over PCT WO 98/51438 (Baxivanelis et al.) in view of US Pat. No. 6,464,433 (Shaffer).

Regarding Appellants Arguments in Paragraph 8 of the Appeal brief, subparagraphs (D), Appellant states that “Examiner asserts that, while WO ‘438 shows a thickness of the indexable tip from support surface to acute corner angles being greater than the thickness from the support surface to the obtuse corner angles, there is no teaching of the tool”.

Appellant traverses the Examiner’s assertion that it would be obvious to combine the insert (indexable tip) of WO ‘438 with the tool (working part) of SHAFFER.

Appellant states that WO ‘438 “fails to disclose a working part and a relationship between a dimension of the working part and a dimension of the indexable tip, as recited in at least independent claim 40”.

Examiner agrees that WO ‘438 teaches the insert (indexable tip), but is silent as to the specifics of the tool (working part) which holds the insert. Examiner further notes that SHAFFER teaches the tool (working part) but is silent as to the specifics of a generic insert (indexable tip) which is used with the tool. It is well-known in the art that a cutting insert is used with a cutting tool as a means of using the insert in the cutting process. The relationship between the cutting insert of WO ‘438 and the tool holder of SHAFFER is that it is well known in the art that a cutting insert is used in a tool holder, and the tool holders are designed to hold a cutting insert.

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Appellant asserts “WO ‘438 fails to teach or suggest a working part elongated in an axial direction having a seat parallel to the axial direction, and a greatest width across the hexagonal shape being 0.92 times a thickness of the working part, as recited in at least independent claim 40”.

Examiner notes that the features upon which applicant relies (i.e., the hexagonal shape being 0.92 times a thickness of the working part) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim 40 states a greatest width across the indexable tip’s hexagonal shape is “**at least 0.92 times**” a thickness of said working part.

Examiner notes that the broad limitation of “at least 0.92 times” a thickness of the working part would include any thickness greater than 0.92 times “a thickness” of the working part.

Examiner further notes that the broad terminology of “a thickness” of the tool (working part) would include any thickness found in a tool (working part). For example, as seen in figure 2 of Shaffer, the generic insert 28 has a “greatest width across” the insert being larger than “a thickness” of the working part as is evident by the insert 28 extending beyond the seat surface (see figures 1 and 3 also).

Examiner further notes that the “thickness” of the insert being greater than the width of the insert seat is a well known feature for having the cutting edge extending beyond the tool for cutting purposes as is shown by Figures 1, 2, 3, 5 and 6 of SHAFFER.

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Appellant further asserts that “WO ‘438 also fails to provide any teaching or suggestion of a cutting tool body”.

Examiner agrees that WO ‘438 teaches a specific cutting insert, but does not disclose the specific cutting tool body for use with the cutting insert.

Appellant asserts that “no proper combination of these documents can render unpatentable the instant invention”.

Examiner disagrees with Appellants assertion, because is well known in the art to use an insert with a working part (tool) as a means of performing the cutting function. It is well known in the art to provide a tool holder with a cutting insert for the purpose of holding the insert in the tool while cutting.

Appellant states that in establishing a prima facie case of obviousness, it is “incumbent upon the Examiner to provide a reason why one of ordinary skill in the art would have found it obvious to modify a prior art reference or to combine reference teachings to arrive at the claimed invention”.

Examiner notes that the existence of specific cutting inserts with generic cutting tools, for example as taught by WO ‘438, and the use of a specific cutting tools with a generic cutting insert, for example as taught by SHAFFER, are both well known in the art. Therefore Examiner still maintains that it would have been “obvious to one of ordinary skill in the art at the time the invention was made to have substituted the specific toolholder taught by Shaffer for the generic tool taught by Baxivanelis et al. for the purpose of providing a boring bar with an optimum degree of straightness, thereby increasing its useful life and providing for the optimum removal

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of material (see Shaffer col. 1, lines 46-67 for example)” as is stated in the above claim 40 rejection.

Appellant further asserts that the “requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from Appellant’s disclosure” and that “the courts have long held that it is impermissible to use Appellants’ claimed invention as an instruction manual or ‘template’ to piece together teachings of the prior art so that the claimed invention is purportedly rendered obvious”.

Examiner notes that the Appellant’s disclosure was not relied upon to as a source of teaching, suggestion or inference that it is well known in the art to use of a specific cutting insert used with a specific cutting tool, as is shown by SHAFFER not limiting the specific cutting tool holder to a specific insert, but instead limiting the specific cutting tool holder to a generic cutting insert, and WO ‘438 not limiting the specific cutting insert to a specific cutting tool holder, but instead limiting the specific cutting insert to a generic cutting tool holder.

Examiner further notes that the use of specific cutting tool holders to hold various specific cutting inserts, as is using specific cutting inserts with various specific cutting tool holders is well known in the art.

Appellant asserts that “it is not apparent from the art of record that replacing the cutting insert of SHAFFER with the indexable tip of WO ‘438 would enable SHAFFER to operate in its intended manner. In particular, Appellants note that problems would appear to arise in balancing the cutting edges of the insert of WO ‘438 when operated in the SHAFFER device. Further, as these manners for mounting are distinctly different, it would not appear obvious to combine

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these documents. Thus, the asserted combination would appear to create vibration and/or prevent precision cuts intended by SHAFFER and or WO '438".

In response to applicant's argument that the indexable tip of WO '438 would not enable SHAFFER to operate in its intended manner, such intended use language is not present in the claim, and furthermore, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). The specific claimed cutting insert and cutting tool structure is found in the prior art.

Appellant asserts hindsight reasoning was used in the combination of WO '438 and SHAFFER.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The combining of a specific cutting tool with a specific cutting insert is well known in the art for the purpose of holding a cutting insert stationary and for manipulating the cutting blades while performing a cutting operation.

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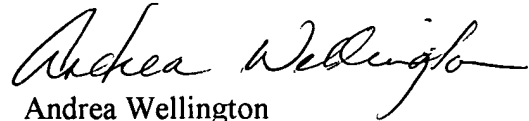
Appellant asserts that “as the Examiner’s asserted combination of documents fails to consider the adverse effects that arise through the asserted combination of WO ‘438 and SHAFFER, the art of record fails to render the Examiner’s asserted combination obvious”.

In response to applicant's argument that the references fail “consider adverse effects that arise” thought the combination of WO ‘438 and SHAFFER, it is noted that the claims are interpreted in light of the specification, however limitations from the specification are not read into the claims. The structural limitations of Appellants invention are found in WO’438 in view of SHAFFER. It is noted that Appellant has not claimed any structural requirements to ensure against “various engineering stresses” or “adverse effects” or “balancing of the cutting edges” as Appellants assert in the reply brief. Appellant states “...it is not apparent that the resulting tool and holder combination would be able to operate in their intended use.” Examiner notes that if the prior art structure is capable of performing the intended use, then it meets the claim.

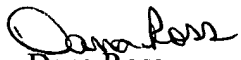
For the above reasons, it is believed that the rejections should be sustained.

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Respectfully submitted,



Andrea Wellington
Supervisory Patent Examiner
Art Unit 3722



Dana Ross
October 14, 2004

Conferee

Greg Vidovich 
Supervisory Patent Examiner, TC 3700

GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191